



Managing X-Ray Waste & List of Waste Haulers

Recycling silver waste

Wastewater treatment plants cannot extract silver from used fixer solution that is poured down the drain. Silver from fixer kills beneficial bacteria in the process at the wastewater treatment plant and ends up in creeks or in biosolids applied to farmland. Silver is a toxic heavy metal and is a valuable resource that should be conserved. Silver from used film and fixer may be classified as hazardous wastes, depending on the concentration of silver. Several services are readily available for proper management of fixer waste. On common practice is to collect fixer and film for collection by an off-site recycling vendor. Silver from fixer can also be reclaimed on-site using a recovery unit that is maintained by a servicing facility. The silver recovery units are simple, efficient, and cost-effective, if maintained properly. Alternately, the fixer solution supplier or manufacturer may be able to take back used fixer as part of the purchasing agreement.



Disposing developer

Note: Undiluted developer is a hazardous waste and is corrosive; it must be disposed of properly. Used developer is not a hazardous waste and can be discharged to a sanitary drain with prior approval of the wastewater treatment authority. Dental facilities that have individual septic systems should not dispose of developer down the drain, as it can damage the septic system; contact an industrial wastewater disposal company for proper disposal.

Recycling lead waste

Lead is a hazardous metal that can contaminate soil and groundwater, if placed in regular garbage, and sent to a landfill. Lead waste is generated at dental offices in foil from intraoral film packets, and discarded lead aprons and collars. Lead foils and aprons/shields can be collected, and dropped off at a local recycler for free, or picked up by your recycling service. Lead aprons can be used for several years with good management. Once an apron is damaged or the collar is worn out and cannot be used, it can be recycled at a licensed facility locally or nationally or sent to a dental charity for reuse. If you need new aprons for your office, consider lead-free aprons. For more information, check out the *Lead-free X-ray Aprons* resource sheet by PACE.



Questions you may ask before choosing a recycler...

- Do you accept chairside trap, vacuum filters, and extracted teeth for recycling?
- Do you provide a container for storage, pickup, or shipping of amalgam waste?
- What type of waste can be packaged together?
- Is disinfection required for amalgam waste?
- Does your company have an EPA or applicable state license?



References:

- [1] Compliance Bulletin Hazardous Waste Photographic, X-Ray and Dental Wastes. Colorado Department of Public Health and Environment, August 2002. www.cdphe.state.co.us/hm/photo.pdf
- [2] Directory of Dental Waste Recyclers. ADA, February 2005. www.ada.org/prof/resources/topics/topics_amalrecyclers.pdf
- [3] Environmental Best Management Practices, Guidelines for Dental Offices. Vermont Department of Environmental Conservation, July 2002. www.mercvt.org/dentalbmp.pdf

Local & Nationwide Dental Waste Recyclers

| Local Waste Recyclers | Amalgam | Silver | | | Lead | | Comments |
|---|-----------------------|--------|-----------------|------------|------------|--------------|--|
| | Contact & Non-Contact | Fixer | Silver Recovery | Scrap Film | Lead Foils | X-ray Shield | |
| Enviro-Solve 4785 Elati #7 Denver (303) 297-3586 | Y | | | | | | |
| Merry X-Ray Chemical 1441 W. Bayaud St. Ste2-A, Denver (303) 698-1701 | | Y | Y | Y | | | Must buy chemicals to use silver recovery & film recycling program. |
| Rocky Mountain Radiographics 9505 N. Tomahawk Rd. Parker (303) 841-3561 www.rkymtnrad.com | | | Y | Y | | | Sells and services recovery systems of various sizes. Will pick up scrap film at no charge. |
| Safety-Kleen 2801 S. Tejon St., Englewood (303) 761-8614 www.safety-kleen.com | Y | Y | Y | Y | Y | Y | Dental office receives credit for "high silver" solutions. |
| S & H Silver Recovery 3060 W. 58 th Ave. Denver (303) 618-9914 | | Y | Y | Y | Y | | |
| Nelson Refining, 5555 Franklin St. Denver (303) 302-5440 | | | Y | Y | Y | Y | Pick up service, sells silver recovery cartridges. |
| Western Aluminum Recycling 3280 Valmont, Unit C Boulder (303) 447-0252 | | | | | Y | Y | Will pay \$0.08/lb. for lead dropped off at facility. |
| National Waste Recyclers | Amalgam | Fixer | Silver Recovery | Scrap Film | Lead Foils | X-ray Shield | Comments |
| AERC Recycling Solutions (800) 628-3675 www.recyclekit.com/ | Y | | | | | | Prepaid mail-in 1-gal pail; accepts extracted teeth. |
| Amalgaway, Inc. www.amalgaway.com | Y | | | | Y | | Prepaid mail-in 1, 2.5, 5-gallon pail; accepts capsules and sludge. |
| Bethlehem Apparatus (610) 838-7034 www.bethlehemapparatus.com/ | Y | | | | | | Direct recycler, prepaid mail-in container; accepts teeth w/ amalgam. |
| DRNA, Inc. (800) 360-1001 www.drna.com/ | Y | | | | Y | | Mail-in, accepts amalgam sludge & teeth w/ amalgam. |
| Enviro Medical Waste, Inc. (866) 669-9201 www.enviromedicalwaste.com/ | Y | | | | Y | | Prepaid mail-in 1, 2.5-gal pail, accepts traps, capsules, and sludge. |
| Heritage Environmental (888) 437-4224 www.heritage-enviro.com | Y | | | | | | Direct recycler, mail-in kit; accepts amalgam sludge & teeth w/ amalgam. |
| Maguire-Strickland Refining (800) 486-2858 www.maguireref.com | Y | | | | Y | | Prepaid mail-in service; accepts all types of amalgam waste. |
| Mercury Waste Solutions (800) 741-3343 www.mwsi.com/ | Y | Y | | | Y | | Direct recycler, prepaid mail-in service in 1, 3.5, 5-gallon pail; accepts all types of amalgam waste. |
| Stericycle (800) 355-8773 www.stericycle.com/dental.html | Y | | | | | | Prepaid mail-in 1, 2, 5-gal pail; accepts capsules and extracted teeth. |

The contents of this resource sheet are accurate to the best knowledge of PACE staff. All references to products, processes, and services are for informational purposes only and do not represent an endorsement of any particular product or entity by the PACE Program. If you are a dental waste recycler and would like to be added to the list or to edit the listing, contact PACE at 303-441-1183.